



Guidance on Dam Failure Inundation Mapping

— A Handout for the National Flood Insurance Program Community Rating System —

A dam failure inundation map is needed for three things in the Community Rating System (CRS):

- (1) For state dam safety credit (SDS) under Activity 630 (Dams). Page 630-5 reads:
 - (1) The SDS credit earned by the state dam safety office is provided to all communities that would be affected by a flood resulting from the failure of a high-hazard-potential dam. This must be documented with a description and a map.
- (2) For credit for local warning and response planning elements (DFR, DFW, DFO, DCF) under Activity 630 (Dams). Page 630-3 reads:
 - (2) The community must submit a description of the dam failure threat, including the following for each high-hazard-potential dam that affects the community. The first three items should be available from the state's dam safety office. If they are not available from the state or the owner of the dam, the community may have to develop the information and document it.
 - (a) A general description of the dam, including its distance upstream from the community;
 - (b) A dam failure inundation map;
- (3) As a prerequisite for a Class 4 or better community. Page 210-6 reads:
 - (c) Have a description of the dam failure threat, including a map of all areas that would be flooded by the failure of each high-hazard-potential dam that affects the community, and an inventory of the buildings and critical facilities that would be flooded. This is the same as activity credit criteria (2) under Activity 630 (Dams), Section 631.b.

In instances in which a dam failure inundation map has been developed but the community is not authorized to release it or make it public, and cannot provide a copy to the ISO/CRS Specialist, the following alternatives are available.

- (1) For the state dam safety (SDS) credit:
 - (a) The community may show the emergency manager's copy of the map to the ISO/CRS Specialist at the verification visit. The ISO/CRS Specialist will note that he/she has seen the map and verified that the community is affected by the failure of a high-hazard-potential dam.
 - (b) Only if (a) is not possible, the community may obtain a letter from the state dam safety office that it is affected by the failure of a high-hazard-potential dam. The local CRS Coordinator must also provide a map that shows the dam's location in relation to the community.
- (2) For credit for the local warning and response planning elements (DFR, DFW, DFO, DCF):
 - (a) The community may develop its own map. This often can be done with available engineering models and tools for estimating dam failure inundation.

(b) The community may use an available dam failure EVACUATION map or use the agency's dam failure inundation map to prepare a dam failure evacuation map. The community would use the evacuation map for its warning and response planning and to determine where the outreach project is to be sent. It is possible that the agency that produced the dam failure inundation map is focused on the security of the dam. In such a case, the concern about sharing information with the public may be alleviated if the community prepares its own map, with a different name, for public safety purposes.

Furthermore, an evacuation map may be more useful to the community if it includes locations outside the dam failure inundation area that should be evacuated because they would be isolated. An evacuation map may also be more effective at motivating residents to prepare for a dam failure than an "inundation map."

(3) For the Class 4 prerequisite, the community may use one of the two alternatives proposed in (2) above for the local warning and response planning elements.